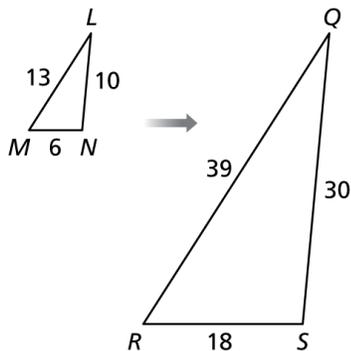


# 8.1

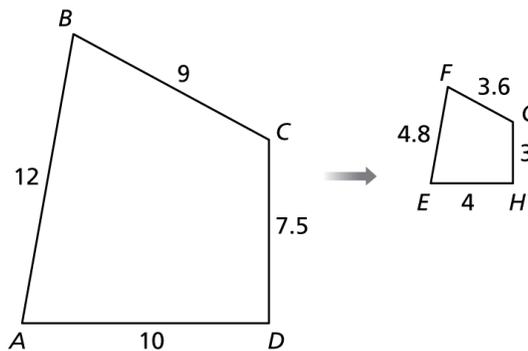
## Practice A

In Exercises 1 and 2, find the scale factor. Then list all pairs of congruent angles and write the ratios of the corresponding side lengths in a statement of proportionality.

1.  $\triangle LMN : \triangle QRS$

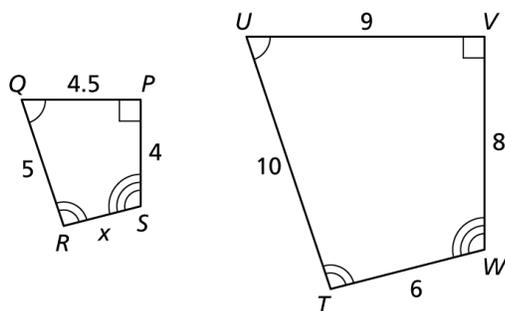


2.  $ABCD : EFGH$

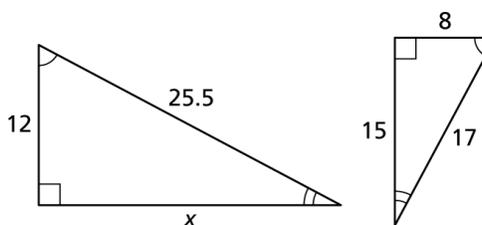


In Exercises 3 and 4, the polygons are similar. Find the value of  $x$ .

3.

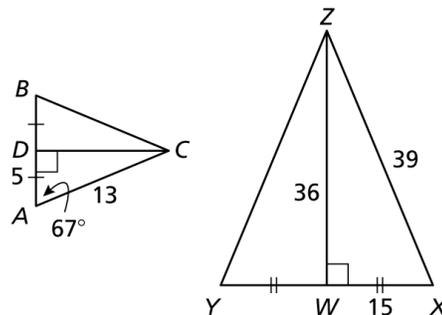


4.

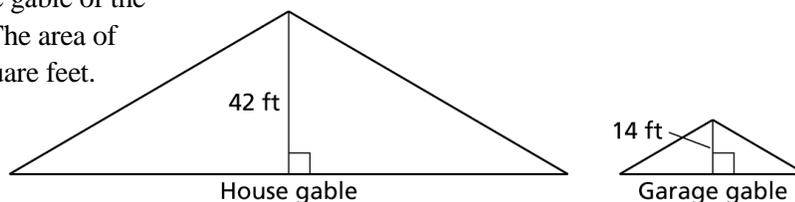


In Exercises 5–11,  $\triangle ABC : \triangle XYZ$ .

5. Find the scale factor of  $\triangle ABC$  to  $\triangle XYZ$ .
6. Find  $m\angle X$ .
7. Find  $CD$ .
8. Find the area of  $\triangle ABC$ . Then find the area of  $\triangle XYZ$ .
9. Find the ratio of the area of  $\triangle ABC$  to the area of  $\triangle XYZ$ .
10. Find  $BC$  and  $YZ$ . Explain your reasoning.
11. Find the ratio of the perimeter of  $\triangle ABC$  to the perimeter of  $\triangle XYZ$ .



12. You are building a roof on a garage such that the gable of the house is similar to the gable of the garage as shown in the diagram. The area of the gable on the house is 3024 square feet. Find the area of the gable on the garage.

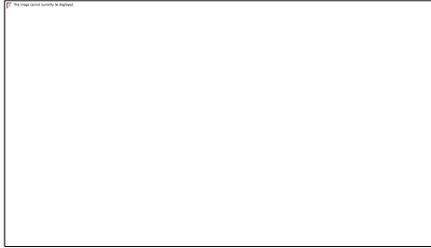


# 8.1

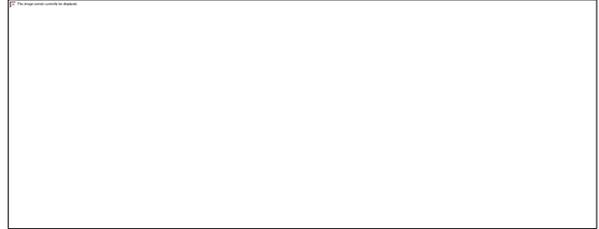
## Practice B

In Exercises 1 and 2, find the scale factor. Then list all pairs of congruent angles and write the ratios of the corresponding side lengths in a statement of proportionality.

1.  $\triangle ABC : \triangle HIJ$



2.  $WXYZ : STUV$



In Exercises 3 and 4, the polygons are similar. Find the value of  $x$ .

3.



4.



In Exercises 5 and 6, the figures are similar. Find the missing corresponding side length.

5. Figure A has a perimeter of 60 inches and one of the side lengths is 5 inches.  
Figure B has a perimeter of 84 inches.

6. Figure A has an area of 4928 square feet and one of the side lengths is 88 feet.  
Figure B has an area of 77 square feet.

7. In the diagram,  $\triangle ABC : \triangle ADE$ .

a. Find the scale factor from  $\triangle ABC$  to  $\triangle ADE$ .

b. Find the value of  $x$ .

c. Find  $m\angle ABC$ .

d. The perimeter of  $\triangle ABC$  is about 42.4 units.  
Find the perimeter of the  $\triangle ADE$ .

e. The area of  $\triangle ABC$  is about 71.75 square units.  
Find the area of the  $\triangle ADE$ .

f. Is  $\overline{BC} \parallel \overline{DE}$ ? Explain your reasoning.

